



SEQUENCE LISTING

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<120> COMPOUNDS AND METHODS FOR TREATMENT OF
THROMBOSIS

<130> 50201/003002

<140> US 10/817,248

<141> 2004-04-02

<150> US 60/459,910

<151> 2003-04-02

<160> 15

<170> FastSEQ for Windows Version 4.0

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<211> 625

<212> PRT

<213> Homo sapiens

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Gly	Asp	Ile	Thr	Thr	Val	Phe	Thr	Pro	Ser	Ala	Lys	Tyr	Cys	Gln	Val
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Val	Cys	Thr	Tyr	His	Pro	Arg	Cys	Leu	Leu	Phe	Thr	Phe	Thr	Ala	Glu
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Ser	Pro	Ser	Glu	Asp	Pro	Thr	Arg	Trp	Phe	Thr	Cys	Val	Leu	Lys	Asp
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Ser	Val	Thr	Glu	Thr	Leu	Pro	Arg	Val	Asn	Arg	Thr	Ala	Ala	Ile	Ser
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Gly	Tyr	Ser	Phe	Lys	Gln	Cys	Ser	His	Gln	Ile	Ser	Ala	Cys	Asn	Lys
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Val	Ala	Lys	Ser	Ala	Gln	Glu	Cys	Gln	Glu	Arg	Cys	Thr	Asp	Asp	Val
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His	Cys	His	Phe	Phe	Thr	Tyr	Ala	Thr	Arg	Gln	Phe	Pro	Ser	Leu	Glu
145					150				155						160

His	Arg	Asn	Ile	Cys	Leu	Leu	Lys	His	Thr	Gln	Thr	Gly	Thr	Pro	Thr
				165					170					175	
Arg	Ile	Thr	Lys	Leu	Asp	Lys	Val	Val	Ser	Gly	Phe	Ser	Leu	Lys	Ser
			180					185					190		
Cys	Ala	Leu	Ser	Asn	Leu	Ala	Cys	Ile	Arg	Asp	Ile	Phe	Pro	Asn	Thr
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Val	Phe	Ala	Asp	Ser	Asn	Ile	Asp	Ser	Val	Met	Ala	Pro	Asp	Ala	Phe
	210					215					220				
Val	Cys	Gly	Arg	Ile	Cys	Thr	His	His	Pro	Gly	Cys	Leu	Phe	Phe	Thr
225					230					235					240
Phe	Phe	Ser	Gln	Glu	Trp	Pro	Lys	Glu	Ser	Gln	Arg	Asn	Leu	Cys	Leu
			245						250					255	
Leu	Lys	Thr	Ser	Glu	Ser	Gly	Leu	Pro	Ser	Thr	Arg	Ile	Lys	Lys	Ser
			260					265					270		
Lys	Ala	Leu	Ser	Gly	Phe	Ser	Leu	Gln	Ser	Cys	Arg	His	Ser	Ile	Pro
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Val	Phe	Cys	His	Ser	Ser	Phe	Tyr	His	Asp	Thr	Asp	Phe	Leu	Gly	Glu
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Glu	Leu	Asp	Ile	Val	Ala	Ala	Lys	Ser	His	Glu	Ala	Cys	Gln	Lys	Leu
305					310					315					320
Cys	Thr	Asn	Ala	Val	Arg	Cys	Gln	Phe	Phe	Thr	Tyr	Thr	Pro	Ala	Gln
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Ala	Ser	Cys	Asn	Glu	Gly	Lys	Gly	Lys	Cys	Tyr	Leu	Lys	Leu	Ser	Ser
			340					345					350		
Asn	Gly	Ser	Pro	Thr	Lys	Ile	Leu	His	Gly	Arg	Gly	Gly	Ile	Ser	Gly
		355					360					365			
Tyr	Thr	Leu	Arg	Leu	Cys	Lys	Met	Asp	Asn	Glu	Cys	Thr	Thr	Lys	Ile
	370					375					380				
Lys	Pro	Arg	Ile	Val	Gly	Gly	Thr	Ala	Ser	Val	Arg	Gly	Glu	Trp	Pro
385					390					395					400
Trp	Gln	Val	Thr	Leu	His	Thr	Thr	Ser	Pro	Thr	Gln	Arg	His	Leu	Cys
			405						410					415	
Gly	Gly	Ser	Ile	Ile	Gly	Asn	Gln	Trp	Ile	Leu	Thr	Ala	Ala	His	Cys
			420					425					430		
Phe	Tyr	Gly	Val	Glu	Ser	Pro	Lys	Ile	Leu	Arg	Val	Tyr	Ser	Gly	Ile
		435					440					445			
Leu	Asn	Gln	Ser	Glu	Ile	Lys	Glu	Asp	Thr	Ser	Phe	Phe	Gly	Val	Gln
	450					455					460				
Glu	Ile	Ile	Ile	His	Asp	Gln	Tyr	Lys	Met	Ala	Glu	Ser	Gly	Tyr	Asp
465					470					475					480
Ile	Ala	Leu	Leu	Lys	Leu	Glu	Thr	Thr	Val	Asn	Tyr	Thr	Asp	Ser	Gln
			485						490					495	
Arg	Pro	Ile	Cys	Leu	Pro	Ser	Lys	Gly	Asp	Arg	Asn	Val	Ile	Tyr	Thr
			500					505					510		
Asp	Cys	Trp	Val	Thr	Gly	Trp	Gly	Tyr	Arg	Lys	Leu	Arg	Asp	Lys	Ile
		515					520					525			
Gln	Asn	Thr	Leu	Gln	Lys	Ala	Lys	Ile	Pro	Leu	Val	Thr	Asn	Glu	Glu
	530					535					540				
Cys	Gln	Lys	Arg	Tyr	Arg	Gly	His	Lys	Ile	Thr	His	Lys	Met	Ile	Cys
545					550					555					560
Ala	Gly	Tyr	Arg	Glu	Gly	Gly	Lys	Asp	Ala	Cys	Lys	Gly	Asp	Ser	Gly
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Gly	Pro	Leu	Ser	Cys	Lys	His	Asn	Glu	Val	Trp	His	Leu	Val	Gly	Ile
			580					585					590		
Thr	Ser	Trp	Gly	Glu	Gly	Cys	Ala	Gln	Arg	Glu	Arg	Pro	Gly	Val	Tyr
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625		
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<212> PRT		
<213> Oryctolagus cuniculus		
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Gly Asp Ile Thr Thr Val Tyr Thr Pro Asn Ala Lys His Cys Gln Val		
35 40 45		
Val Cys Thr Tyr His Pro Arg Cys Leu Leu Phe Thr Phe Met Ala Glu		
50 55 60		
Ser Ser Val Asp Ser Thr Lys Trp Phe Ser Cys Ile Leu Lys Asp Ser		
65 70 75 80		
Val Thr Glu Ser Leu Pro Lys Val Asn Met Thr Gly Ala Ile Ser Gly		
85 90 95		
Tyr Ser Phe Lys Gln Cys Pro His Gln Leu Ser Ala Cys Asn Lys Asp		
100 105 110		
Ile Tyr Val Asp Leu Asp Met Gln Gly Met Asn Tyr Asn Gly Ser Val		
115 120 125		
Thr Lys Asn Ala Gln Glu Cys Gln Glu Arg Cys Thr Asn Asp Ala His		
130 135 140		
Cys His Phe Phe Thr Tyr Ala Thr Arg Gln Phe Pro Ser Ala Glu His		
145 150 155 160		
Arg Asn Ile Cys Leu Leu Lys Tyr Thr Gln Thr Gly Ala Pro Thr Gly		
165 170 175		
Ile Arg Lys Leu Lys Lys Val Val Ser Gly Phe Ser Leu Lys Ser Cys		
180 185 190		
Ala Leu Ser Asn Leu Ala Cys Ile Arg Asp Ile Phe Pro Ser Thr Val		
195 200 205		
Phe Ala Asp Asn Asn Ile Asp Ser Val Val Ala Pro Asp Ala Leu Val		
210 215 220		
Cys Arg Arg Ile Cys Thr His His Pro Asn Cys Leu Phe Phe Thr Phe		
225 230 235 240		
Phe Ser Gln Glu Trp Pro Lys Glu Ser His Arg Asn Leu Cys Leu Leu		
245 250 255		
Lys Thr Ser Glu Ser Gly Leu Pro Ser Thr Arg Ile His Lys Asn Gln		
260 265 270		
Ala Leu Ser Gly Phe Ser Leu Gln Asn Cys Arg His Ser Ile Pro Val		
275 280 285		
Phe Cys His Ser Ser Phe Tyr Asp Thr Asp Phe Leu Gly Glu Glu		
290 295 300		
Leu Asp Ile Val Asp Val Lys Gly His Glu Ala Cys Gln Lys Met Cys		
305 310 315 320		
Thr Ser Ala Ile Arg Cys Gln Phe Phe Thr Tyr Ser Ser Ser Gln Glu		
325 330 335		
Ser His Asn Lys Gly Lys Gly Thr Cys Tyr Leu Lys Leu Ser Ser Asn		
340 345 350		
Gly Ser Pro Thr Lys Ile Leu His Gly Arg Gly Gly Ile Ser Gly Tyr		
355 360 365		

Thr	Leu	Arg	Leu	Cys	Lys	Met	Asp	Asn	Val	Cys	Thr	Thr	Lys	Ile	Lys
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Pro	Arg	Ile	Val	Gly	Gly	Ser	Ala	Ser	Leu	Pro	Gly	Glu	Trp	Pro	Trp
385					390					395					400
Gln	Val	Thr	Leu	His	Thr	Val	Ser	Pro	Thr	Gln	Arg	His	Leu	Cys	Gly
				405					410					415	
Gly	Ser	Ile	Ile	Gly	Asn	Gln	Trp	Ile	Leu	Thr	Ala	Ala	His	Cys	Phe
			420					425					430		
Tyr	Gly	Ile	Glu	Ser	Pro	Lys	Ile	Leu	Arg	Val	Tyr	Gly	Gly	Ile	Leu
	435					440					445				
Asn	Gln	Ser	Glu	Ile	Lys	Glu	Asp	Thr	Ala	Phe	Phe	Gly	Val	Gln	Glu
450						455					460				
Ile	Ile	Ile	His	Asp	Gln	Tyr	Lys	Thr	Ala	Glu	Ser	Gly	Tyr	Asp	Ile
465					470					475					480
Ala	Leu	Leu	Lys	Leu	Glu	Thr	Thr	Met	Asn	Tyr	Thr	Asp	Ser	Gln	Arg
				485					490					495	
Pro	Ile	Cys	Leu	Pro	Ser	Lys	Gly	Asp	Arg	Asn	Val	Ile	Tyr	Thr	Asp
			500					505					510		
Cys	Trp	Val	Thr	Gly	Trp	Gly	Tyr	Arg	Lys	Leu	Arg	Asp	Lys	Ile	Gln
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Asn	Thr	Leu	Gln	Lys	Ala	Lys	Ile	Pro	Leu	Leu	Ser	Asn	Glu	Glu	Cys
530						535					540				
Gln	Lys	Arg	Tyr	Gln	Arg	His	Glu	Ile	Thr	Ser	Gly	Met	Ile	Cys	Ala
545					550					555					560
Gly	Tyr	Lys	Glu	Gly	Gly	Lys	Asp	Ala	Cys	Lys	Gly	Asp	Ser	Gly	Gly
				565				570						575	
Pro	Leu	Ser	Cys	Lys	His	Asn	Glu	Val	Trp	His	Leu	Val	Gly	Ile	Thr
			580					585					590		
Ser	Trp	Gly	Glu	Gly	Cys	Ala	Gln	Arg	Glu	Arg	Pro	Gly	Ile	Tyr	Thr
	595						600					605			
Asn	Val	Val	Lys	Tyr	Leu	Asp	Trp	Ile	Leu	Glu	Lys	Thr	Gln	Ala	Pro
610						615					620				

<210> 3
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 <212> PRT
 <213> Mus musculus

Met	Thr	Ser	Leu	His	Gln	Val	Leu	Tyr	Phe	Ile	Phe	Phe	Ala	Ser	Val
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Gly	Asp	Leu	Ser	Thr	Val	Phe	Thr	Pro	Ser	Ala	Thr	Tyr	Cys	Arg	Leu
	35						40					45			
Val	Cys	Thr	His	His	Pro	Arg	Cys	Leu	Leu	Phe	Thr	Phe	Met	Ala	Glu
	50					55					60				
Ser	Ser	Ser	Asp	Asp	Pro	Thr	Lys	Trp	Phe	Ala	Cys	Ile	Leu	Lys	Asp
65					70					75					80
Ser	Val	Thr	Glu	Ile	Leu	Pro	Met	Val	Asn	Met	Thr	Gly	Ala	Ile	Ser
				85					90					95	
Gly	Tyr	Ser	Phe	Lys	Gln	Cys	Pro	Gln	Gln	Leu	Ser	Thr	Cys	Ser	Lys
			100					105					110		
Asp	Glu	Tyr	Val	Asn	Leu	Asp	Met	Lys	Gly	Met	Asn	Tyr	Asn	Ser	Ser
	115						120					125			
Val	Val	Lys	Asn	Ala	Arg	Glu	Cys	Gln	Glu	Arg	Cys	Thr	Asp	Asp	Ala

130	135	140
His Cys Gln Phe Phe Thr Tyr Ala Thr Gly Tyr Phe Pro Ser Val Asp		
145	150	155
His Arg Lys Met Cys Leu Leu Lys Tyr Thr Arg Thr Gly Thr Pro Thr		
	165	170
Thr Ile Thr Lys Leu Asn Gly Val Val Ser Gly Phe Ser Leu Lys Ser		
	180	185
Cys Gly Leu Ser Asn Leu Ala Cys Ile Arg Asp Ile Phe Pro Asn Thr		
	195	200
Val Leu Ala Asp Leu Asn Ile Asp Ser Val Val Ala Pro Asp Ala Phe		
	210	215
Val Cys Arg Arg Ile Cys Thr His His Pro Thr Cys Leu Phe Phe Thr		
225	230	235
Phe Phe Ser Gln Ala Trp Pro Lys Glu Ser Gln Arg His Leu Cys Leu		
	245	250
Leu Lys Thr Ser Glu Ser Gly Leu Pro Ser Thr Arg Ile Thr Lys Ile		
	260	265
His Ala Leu Ser Gly Phe Ser Leu Gln His Cys Arg His Ser Val Pro		
	275	280
Val Phe Cys His Pro Ser Phe Tyr Asn Asp Thr Asp Phe Leu Gly Glu		
	290	295
Glu Leu Asp Ile Val Asp Val Lys Gly Gln Glu Thr Cys Gln Lys Thr		
305	310	315
Cys Thr Asn Asn Ala Arg Cys Gln Phe Phe Thr Tyr Tyr Pro Ser His		
	325	330
Arg Leu Cys Asn Glu Arg Asn Arg Arg Gly Arg Cys Tyr Leu Lys Leu		
	340	345
Ser Ser Asn Gly Ser Pro Thr Arg Ile Leu His Gly Arg Gly Gly Leu		
	355	360
Ser Gly Tyr Ser Leu Arg Leu Cys Lys Met Asp Asn Val Cys Thr Thr		
	370	375
Lys Ile Asn Pro Arg Val Val Gly Gly Ala Ala Ser Val His Gly Glu		
385	390	395
Trp Pro Trp Gln Val Thr Leu His Ile Ser Gln Gly His Leu Cys Gly		
	405	410
Gly Ser Ile Ile Gly Asn Gln Trp Ile Leu Thr Ala Ala His Cys Phe		
	420	425
Ser Gly Ile Glu Thr Pro Lys Lys Leu Arg Val Tyr Gly Gly Ile Val		
	435	440
Asn Gln Ser Glu Ile Asn Glu Gly Thr Ala Phe Phe Arg Glu Gln Glu		
	450	455
Met Ile Ile His Asp Gln Tyr Thr Thr Ala Glu Ser Gly Tyr Asp Ile		
465	470	475
Ala Leu Leu Lys Leu Glu Ser Ala Met Asn Tyr Thr Asp Phe Gln Arg		
	485	490
Pro Ile Cys Leu Pro Ser Lys Gly Asp Arg Asn Ala Val His Thr Glu		
	500	505
Cys Trp Val Thr Gly Trp Gly Tyr Thr Ala Leu Arg Gly Glu Val Gln		
	515	520
Ser Thr Leu Gln Lys Ala Lys Val Pro Leu Val Ser Asn Glu Glu Cys		
	530	535
Gln Thr Arg Tyr Arg Arg His Lys Ile Thr Asn Lys Met Ile Cys Ala		
545	550	555
Gly Tyr Lys Glu Gly Gly Lys Asp Thr Cys Lys Gly Asp Ser Gly Gly		
	565	570
Pro Leu Ser Cys Lys Tyr Asn Gly Val Trp His Leu Val Gly Ile Thr		
	580	585
		590

Ser Trp Gly Glu Gly Cys Gly Gln Lys Glu Arg Pro Gly Val Tyr Thr
595 600 605
Asn Val Ala Lys Tyr Val Asp Trp Ile Leu Glu Lys Thr Gln Thr Val
610 615 620

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<211> 708
<212> DNA
<213> Rattus Norvegicus

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accaggggac acctgtgtgg aggctccatc attggaaacc ggtggatatt gacagcggct 120
cattgtttct ctgggacaga gacacctaaa actctgcgtg tctacgggtg tattgtaaat 180
caatcagaaa taaatgaaga taccactttc ttcagggttc aagaaatgat aattcatgat 240
caatatacat cggcagaaaag tgggtttgac attgccctct taaaactgga accggccatg 300
aattacacag attttcagcg gccaatatgc ctgccttcca aaggagacag aaacgtagtt 360
cacacagaat gctgggtgac tggatgggga tacacaaaat caagagatga agtacaaagt 420
actctccaga aagccaaggt accattgggtg tcgaatgaag aatgtcaaac aagatacaga 480
aaacataaaa taaccaacaa ggtgatctgt gcaggatata aggaaggagg gaaggatacg 540
tgtaagggag attctggagg gccctgtcc tgcaaacaca atgggggtctg gcacttggtg 600
ggcatcacia gctgggggtga aggtgcggc cagaaagaga ggccgggtgt ctacaccaac 660
gtggccaagt atgtggactg gattttggag aaaactcagt cggaatga 708

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<211> 33
<212> DNA
<213> Rattus Norvegicus

<400> 5
gtgttcggag gagctgcgtc tgttcacggc gag 33

<210> 6
<211> 36
<212> DNA
<213> Rattus Norvegicus

<400> 6
gtggactgga ttttgagaaa aactcagtcg gaatga 36

<210> 7
<211> 27
<212> DNA
<213> Rattus Norvegicus

<400> 7
atggataatg tgtgcacaac taaaatc 27

<210> 8
<211> 30
<212> DNA
<213> Rattus Norvegicus

<400> 8
tccagggcca caaagtgata ccagttgaac 30

<210> 9
 <211> 238
 <212> PRT
 <213> Homo sapien

<400> 9
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 Thr Leu His Thr Ser Pro Thr Gln Arg His Leu Cys Gly Gly Ser
 20 25 30
 Ile Ile Gly Asn Gln Trp Ile Leu Thr Ala Ala His Cys Phe Tyr Gly
 35 40 45
 Val Glu Ser Pro Lys Ile Leu Arg Val Tyr Ser Gly Ile Leu Asn Gln
 50 55 60
 Ser Glu Ile Lys Glu Asp Thr Ser Phe Phe Gly Val Gln Glu Ile Ile
 65 70 75 80
 Ile His Asp Gln Tyr Lys Met Ala Glu Ser Gly Tyr Asp Ile Ala Leu
 85 90 95
 Leu Lys Leu Glu Thr Thr Val Asn Tyr Thr Asp Ser Gln Arg Pro Ile
 100 105 110
 Cys Leu Pro Ser Lys Gly Asp Arg Asn Val Ile Tyr Thr Asp Cys Trp
 115 120 125
 Val Thr Gly Trp Gly Tyr Arg Lys Leu Arg Asp Lys Ile Gln Asn Thr
 130 135 140
 Leu Gln Lys Ala Lys Ile Pro Leu Val Thr Asn Glu Glu Cys Gln Lys
 145 150 155 160
 Arg Tyr Arg Gly His Lys Ile Thr His Lys Met Ile Cys Ala Gly Tyr
 165 170 175
 Arg Glu Gly Gly Lys Asp Ala Cys Lys Gly Asp Ser Gly Gly Pro Leu
 180 185 190
 Ser Cys Lys His Asn Glu Val Trp His Leu Val Gly Ile Thr Ser Trp
 195 200 205
 Gly Glu Gly Cys Ala Gln Arg Glu Arg Pro Gly Val Tyr Thr Asn Val
 210 215 220
 Val Glu Tyr Val Asp Trp Ile Leu Glu Lys Thr Gln Ala Val
 225 230 235

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 <212> PRT
 <213> Mus musculus

<400> 10
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 Thr Leu His Ile Ser Gln Gly His Leu Cys Gly Gly Ser Ile Ile Gly
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 Asn Gln Trp Ile Leu Thr Ala Ala His Cys Phe Ser Gly Ile Glu Thr
 35 40 45
 Pro Lys Lys Leu Arg Val Tyr Gly Gly Ile Val Asn Gln Ser Glu Ile
 50 55 60
 Asn Glu Gly Thr Ala Phe Phe Arg Glu Gln Glu Met Ile Ile His Asp
 65 70 75 80
 Gln Tyr Thr Thr Ala Glu Ser Gly Tyr Asp Ile Ala Leu Leu Lys Leu
 85 90 95
 Glu Ser Ala Met Asn Tyr Thr Asp Phe Gln Arg Pro Ile Cys Leu Pro

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 <212> PRT
 <213> Rattus Norvigicus

<400> 12
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 Thr Leu His Thr Gln Gly His Leu Cys Gly Gly Ser Ile Ile Gly
 20 25 30
 Asn Arg Trp Ile Leu Thr Ala Ala His Cys Phe Ser Gly Thr Glu Thr
 35 40 45
 Pro Lys Thr Leu Arg Val Tyr Gly Gly Ile Val Asn Gln Ser Glu Ile
 50 55 60
 Asn Glu Asp Thr Thr Phe Phe Arg Val Gln Glu Met Ile Ile His Asp
 65 70 75 80
 Gln Tyr Thr Ser Ala Glu Ser Gly Phe Asp Ile Ala Leu Leu Lys Leu
 85 90 95
 Glu Pro Ala Met Asn Tyr Thr Asp Phe Gln Arg Pro Ile Cys Leu Pro
 100 105 110
 Ser Lys Gly Asp Arg Asn Val Val His Thr Glu Cys Trp Val Thr Gly
 115 120 125
 Trp Gly Tyr Thr Lys Ser Arg Asp Glu Val Gln Ser Thr Leu Gln Lys
 130 135 140
 Ala Lys Val Pro Leu Val Ser Asn Glu Glu Cys Gln Thr Arg Tyr Arg
 145 150 155 160
 Lys His Lys Ile Thr Asn Lys Val Ile Cys Ala Gly Tyr Lys Glu Gly
 165 170 175
 Gly Lys Asp Thr Cys Lys Gly Asp Ser Gly Gly Pro Leu Ser Cys Lys
 180 185 190
 His Asn Gly Val Trp His Leu Val Gly Ile Thr Ser Trp Gly Glu Gly
 195 200 205
 Cys Gly Gln Lys Glu Arg Pro Gly Val Tyr Thr Asn Val Ala Lys Tyr
 210 215 220
 Val Asp Trp Ile Leu Glu Lys Thr Gln Ser Glu
 225 230 235

<210> 13
 <211> 30
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 13
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30

<210> 14
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic

<400> 14

Val Ser Leu Glu Lys Arg Ile Val Gly Gly
1 5 10

<210> 15

<211> 607

<212> PRT

<213> Homo sapiens

<400> 15

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20 25 30
Thr Tyr His Pro Arg Cys Leu Leu Phe Thr Phe Thr Ala Glu Ser Pro
35 40 45
Ser Glu Asp Pro Thr Arg Trp Phe Thr Cys Val Leu Lys Asp Ser Val
50 55 60
Thr Glu Thr Leu Pro Arg Val Asn Arg Thr Ala Ala Ile Ser Gly Tyr
65 70 75 80
Ser Phe Lys Gln Cys Ser His Gln Ile Ser Ala Cys Asn Lys Asp Ile
85 90 95
Tyr Val Asp Leu Asp Met Lys Gly Ile Asn Tyr Asn Ser Ser Val Ala
100 105 110
Lys Ser Ala Gln Glu Cys Gln Glu Arg Cys Thr Asp Asp Val His Cys
115 120 125
His Phe Thr Tyr Ala Thr Arg Gln Phe Pro Ser Leu Glu His Arg
130 135 140
Asn Ile Cys Leu Leu Lys His Thr Gln Thr Gly Thr Pro Thr Arg Ile
145 150 155 160
Thr Lys Leu Asp Lys Val Val Ser Gly Phe Ser Leu Lys Ser Cys Ala
165 170 175
Leu Ser Asn Leu Ala Cys Ile Arg Asp Ile Phe Pro Asn Thr Val Phe
180 185 190
Ala Asp Ser Asn Ile Asp Ser Val Met Ala Pro Asp Ala Phe Val Cys
195 200 205
Gly Arg Ile Cys Thr His His Pro Gly Cys Leu Phe Phe Thr Phe Phe
210 215 220
Ser Gln Glu Trp Pro Lys Glu Ser Gln Arg Asn Leu Cys Leu Leu Lys
225 230 235 240
Thr Ser Glu Ser Gly Leu Pro Ser Thr Arg Ile Lys Lys Ser Lys Ala
245 250 255
Leu Ser Gly Phe Ser Leu Gln Ser Cys Arg His Ser Ile Pro Val Phe
260 265 270
Cys His Ser Ser Phe Tyr His Asp Thr Asp Phe Leu Gly Glu Glu Leu
275 280 285
Asp Ile Val Ala Ala Lys Ser His Glu Ala Cys Gln Lys Leu Cys Thr
290 295 300
Asn Ala Val Arg Cys Gln Phe Phe Thr Tyr Thr Pro Ala Gln Ala Ser
305 310 315 320
Cys Asn Glu Gly Lys Gly Lys Cys Tyr Leu Lys Leu Ser Ser Asn Gly
325 330 335
Ser Pro Thr Lys Ile Leu His Gly Arg Gly Gly Ile Ser Gly Tyr Thr
340 345 350
Leu Arg Leu Cys Lys Met Asp Asn Glu Cys Thr Thr Lys Ile Lys Pro
355 360 365

Arg	Ile	Val	Gly	Gly	Thr	Ala	Ser	Val	Arg	Gly	Glu	Trp	Pro	Trp	Gln
370						375			380						
Val	Thr	Leu	His	Thr	Thr	Ser	Pro	Thr	Gln	Arg	His	Leu	Cys	Gly	Gly
385						390			395						
Ser	Ile	Ile	Gly	Asn	Gln	Trp	Ile	Leu	Thr	Ala	Ala	His	Cys	Phe	Tyr
405						410			415						
Gly	Val	Glu	Ser	Pro	Lys	Ile	Leu	Arg	Val	Tyr	Ser	Gly	Ile	Leu	Asn
420						425			430						
Gln	Ser	Glu	Ile	Lys	Glu	Asp	Thr	Ser	Phe	Phe	Gly	Val	Gln	Glu	Ile
435						440			445						
Ile	Ile	His	Asp	Gln	Tyr	Lys	Met	Ala	Glu	Ser	Gly	Tyr	Asp	Ile	Ala
450						455			460						
Leu	Leu	Lys	Leu	Glu	Thr	Thr	Val	Asn	Tyr	Thr	Asp	Ser	Gln	Arg	Pro
465						470			475						
Ile	Cys	Leu	Pro	Ser	Lys	Gly	Asp	Arg	Asn	Val	Ile	Tyr	Thr	Asp	Cys
485						490			495						
Trp	Val	Thr	Gly	Trp	Gly	Tyr	Arg	Lys	Leu	Arg	Asp	Lys	Ile	Gln	Asn
500						505			510						
Thr	Leu	Gln	Lys	Ala	Lys	Ile	Pro	Leu	Val	Thr	Asn	Glu	Glu	Cys	Gln
515						520			525						
Lys	Arg	Tyr	Arg	Gly	His	Lys	Ile	Thr	His	Lys	Met	Ile	Cys	Ala	Gly
530						535			540						
Tyr	Arg	Glu	Gly	Gly	Lys	Asp	Ala	Cys	Lys	Gly	Asp	Ser	Gly	Gly	Pro
545						550			555						
Leu	Ser	Cys	Lys	His	Asn	Glu	Val	Trp	His	Leu	Val	Gly	Ile	Thr	Ser
565						570			575						
Trp	Gly	Glu	Gly	Cys	Ala	Gln	Arg	Glu	Arg	Pro	Gly	Val	Tyr	Thr	Asn
580						585			590						
Val	Val	Glu	Tyr	Val	Asp	Trp	Ile	Leu	Glu	Lys	Thr	Gln	Ala	Val	
595						600			605						